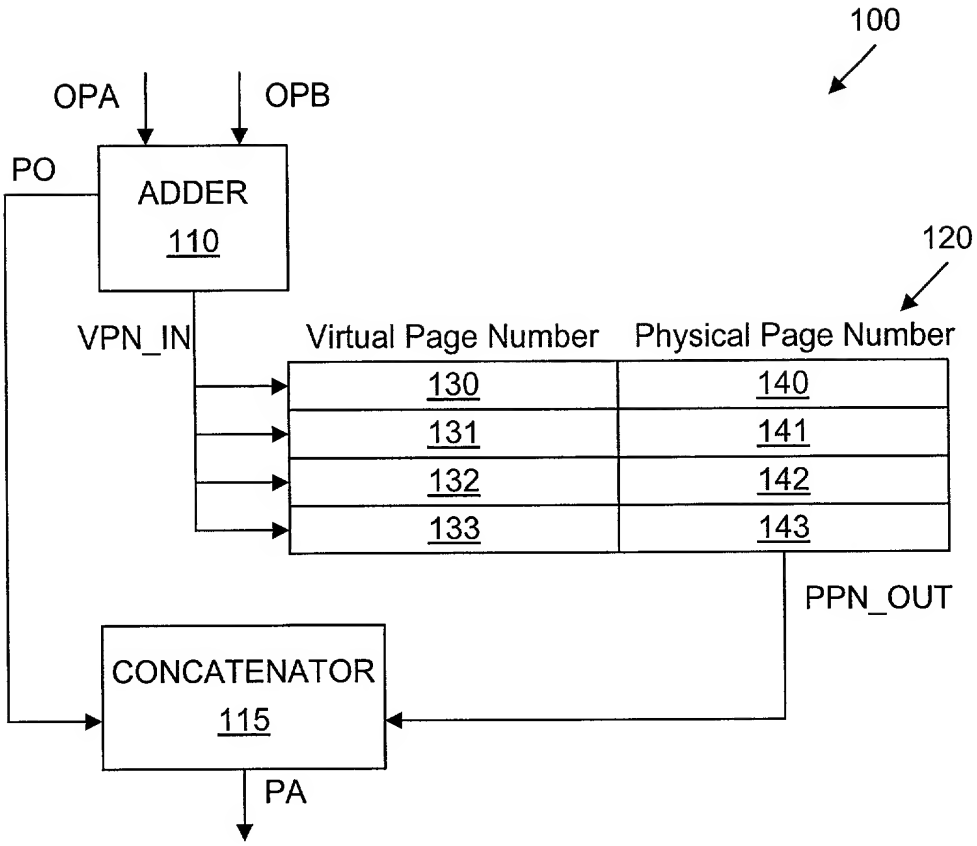

Figure 1
(PRIOR ART)

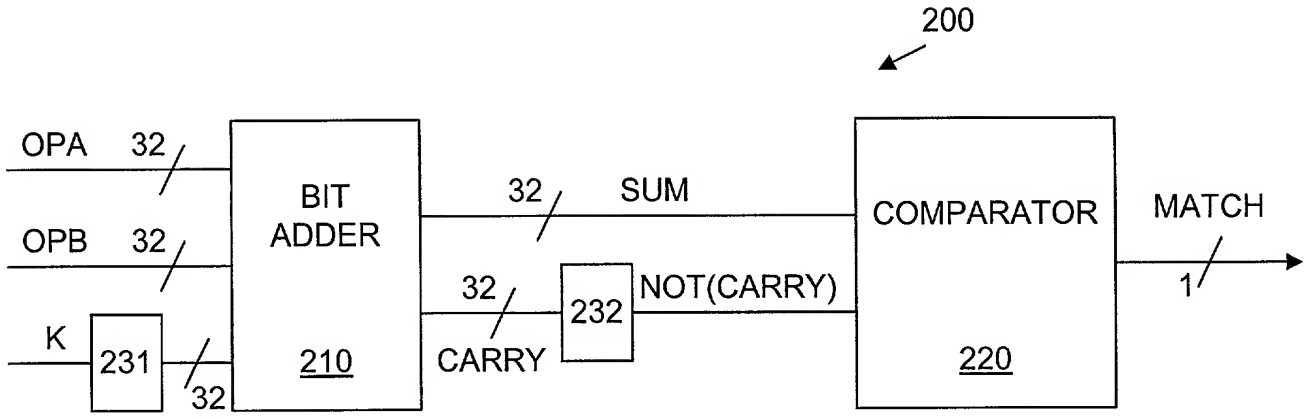

Figure 2A

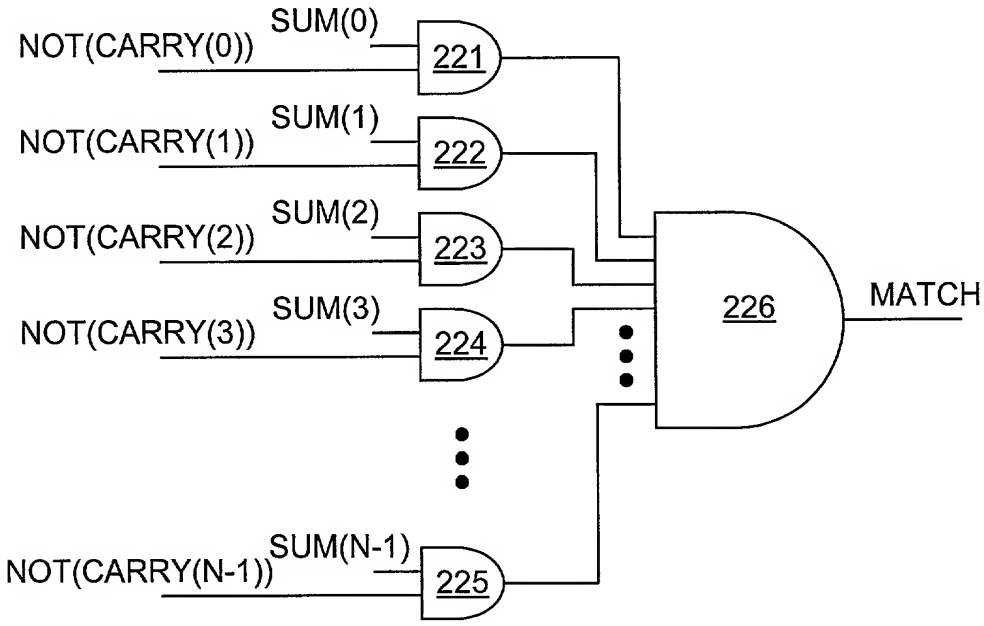

Figure 2B

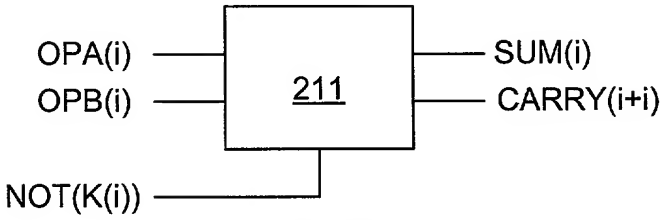

Figure 2C

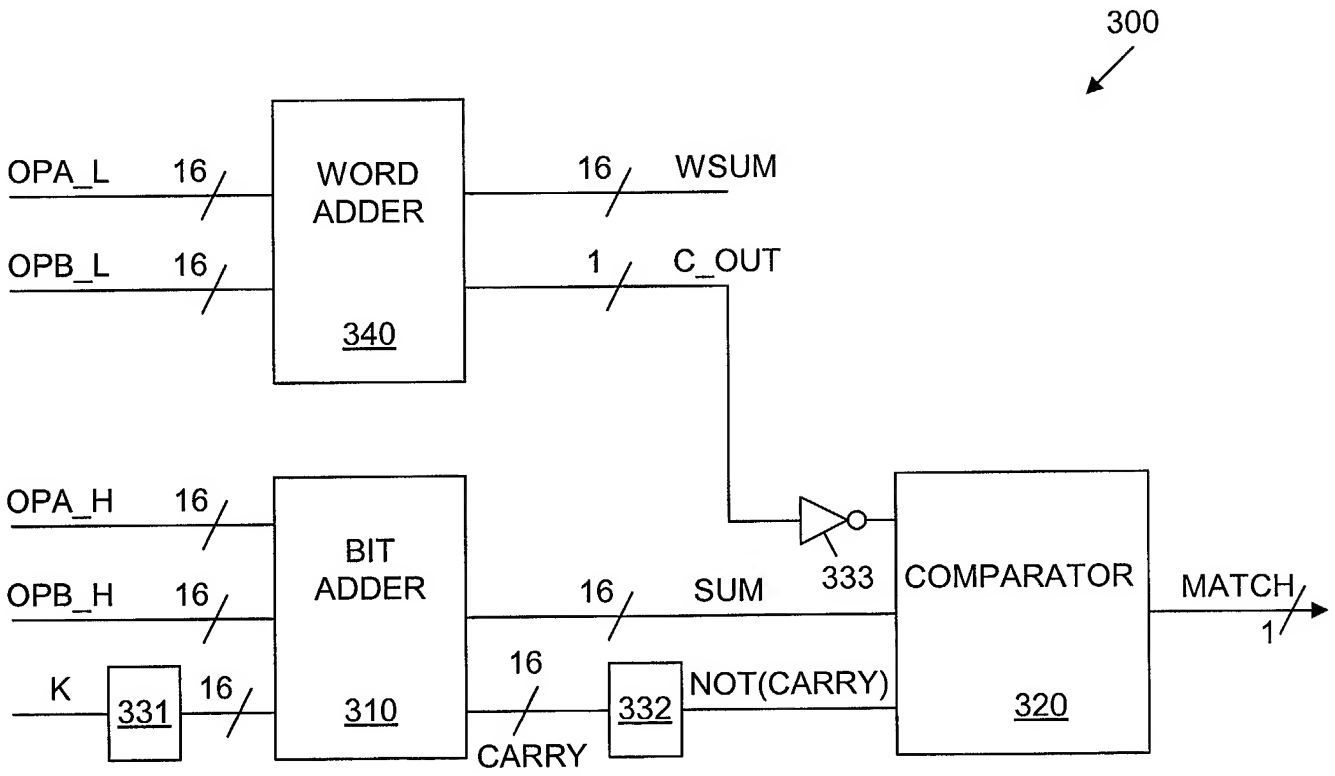
300
OPA_L
16
WORD ADDER
16
WSUM
OPB_L
16
1
C_OUT
340
OPA_H
16
BIT ADDER
333
COMPARATOR
MATCH
1
OPB_H
16
16
SUM
K
331
16
310
16
CARRY
332
NOT(CARRY)
320

Figure 3

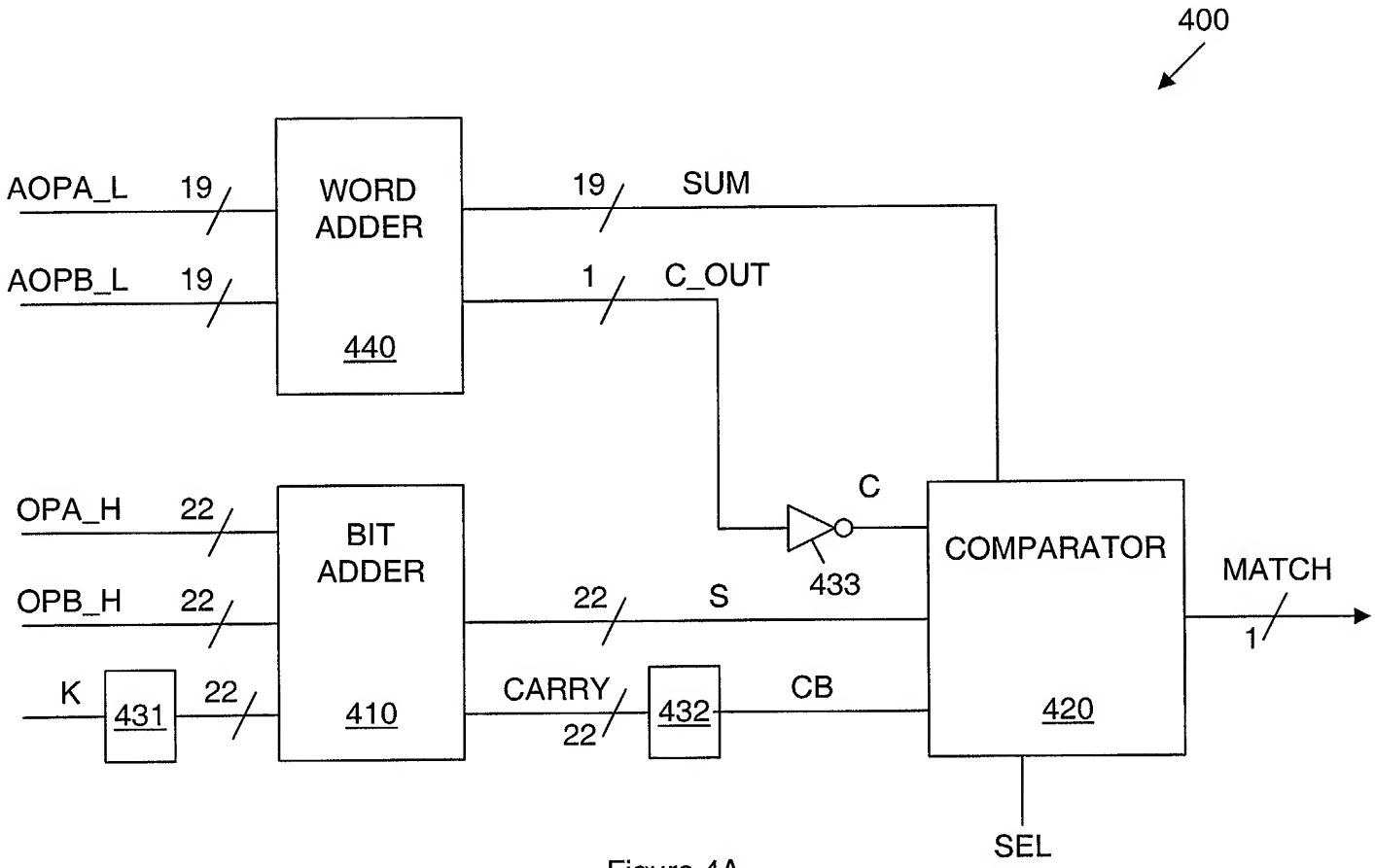
400
AOPA_L
19
WORD ADDER
440
19
SUM
AOPB_L
19
1
C_OUT
C
OPA_H
22
BIT ADDER
410
433
COMPARATOR
420
MATCH
1
OPB_H
22
22
S
K
431
22
CARRY
22
432
CB
SEL

Figure 4A

		18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
450 →	Bit																			
451 →	OP1				0	0	1	1	0	0	0	0	0	1	1	1	0	0	1	0
452 →	AUG1	0	0	1	1	1	1	0	0	1	0	0	0	1	1	1	0	0	1	0

Agumented with Logic "1" values

453 →	OP2				1	1	1	1	1	0	0	1	0	1	0	1	0	1	1	0
454 →	AUG2	1	1	0	1	1	0	1	0	0	0	1	0	1	0	1	0	1	1	0

Agumented with Logic "0" values

		18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
455 →	Bit																			
456 →	AUG1	0	0	1	1	1	1	0	0	1	0	0	0	1	1	1	0	0	1	0
457 →	AUG2	1	1	0	1	1	0	1	0	0	0	1	0	1	0	1	0	1	1	0
458 →	ASUM	0	0	0	1	0	1	1	0	1	0	1	1	1	0	0	1	0	0	0
459 →	ACARRY																			1

Figure 4B

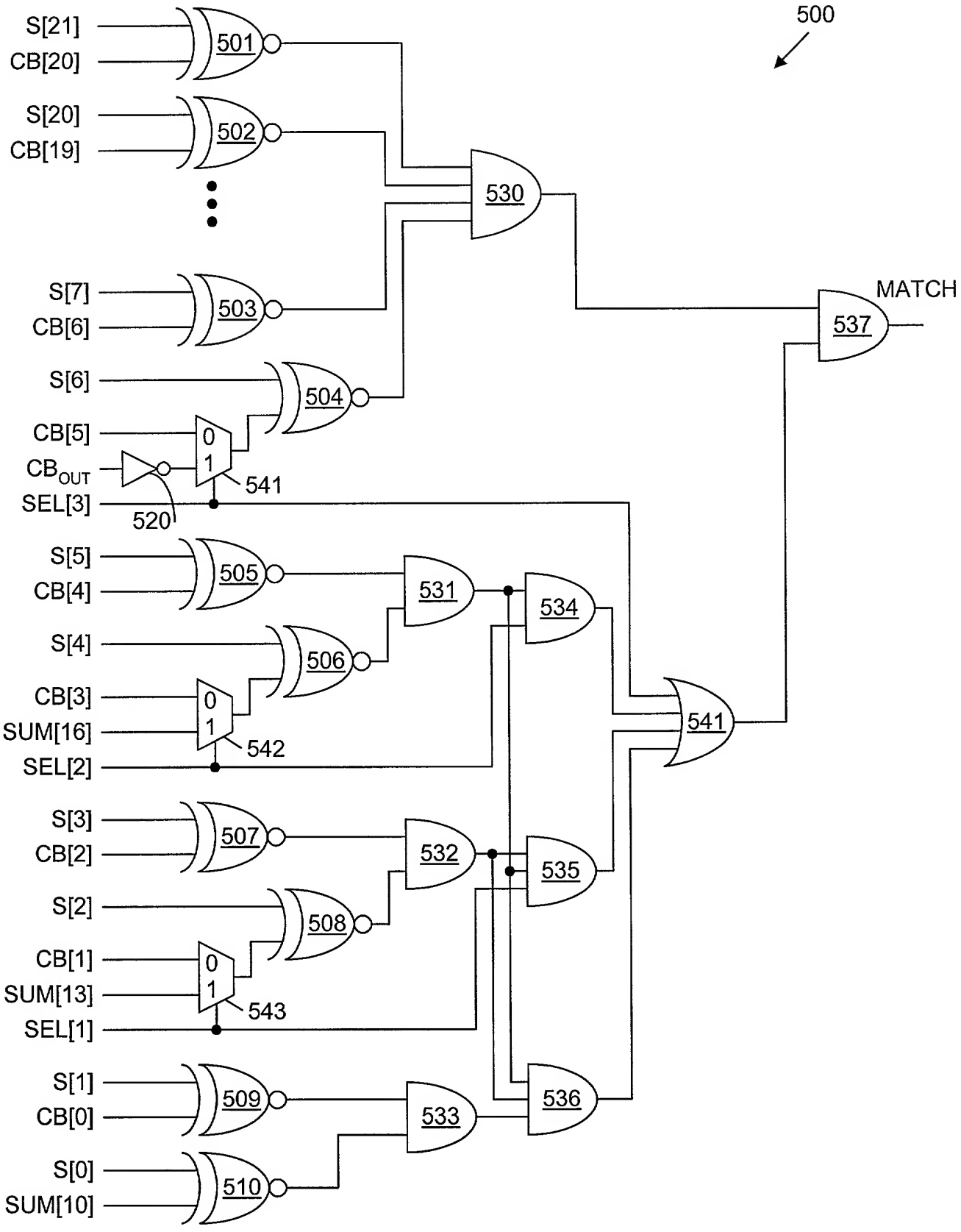
500
S[21]
CB[20]
501
S[20]
CB[19]
502
530
S[7]
CB[6]
503
MATCH
537
S[6]
504
CB[5]
0
1
541
CB_OUT
SEL[3]
520
S[5]
CB[4]
505
531
534
S[4]
506
CB[3]
0
1
SUM[16]
542
SEL[2]
541
S[3]
CB[2]
507
532
535
S[2]
508
CB[1]
0
1
SUM[13]
543
SEL[1]
S[1]
CB[0]
509
533
536
S[0]
SUM[10]
510

Figure 5